

**SEVENTH FIVE-YEAR REVIEW REPORT FOR  
PLYMOUTH HARBOR/CANNON ENGINEERING CORP. (CEC) SUPERFUND SITE  
PLYMOUTH COUNTY, MASSACHUSETTS**



**Prepared by**

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**Date**

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## LIST OF ABBREVIATIONS & ACRONYMS

ALM	Adult Lead Methodology
ARAR	Applicable or Relevant and Appropriate Requirement
AST	Aboveground Storage Tank
BLL	Blood Lead Level
CD	Consent Decree
CEC	Cannon Engineering Corp.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
DMEA	Department of Marine and Environmental Affairs
EPA	United States Environmental Protection Agency
FYR	Five-Year Review
HQ	Hazard Quotient
IC	Institutional Control
MADEQE	Massachusetts Department of Environmental Quality Engineering
MassDEP	Massachusetts Department of Environmental Protection
µg/dL	Micrograms per Deciliter
mg/kg	Milligrams per Kilogram
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OLEM	Office of Land and Emergency Management
OSWER	Office of Solid Waste and Emergency Response
OU	Operable Unit
PAH	Polycyclic Aromatic Hydrocarbon
PFAS	Polyfluoroalkyl Substances
ppm	Parts per Million
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
RSL	Regional Screening Level
SL	Screening Level
SP	Settling Party
TBC	To Be Considered
TCA	Trichloroethane
UU/UE	Unlimited Use and Unrestricted Exposure
VOC	Volatile Organic Compound

## **I. INTRODUCTION**

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the seventh FYR for the Plymouth Harbor/Cannon Engineering Corp. (CEC) Superfund site (Site). The triggering action for this policy review is the completion date of the previous FYR. The FYR has been prepared because hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

EPA designated the Site as having two operable units (OUs). OU1 addresses the tanks and was not expected to be a final remedy. OU2 was expected to serve as the final remedy. However, EPA determined that after the implementation of the OU1 remedy, no additional action was needed, therefore a decision document related to OU2 was never prepared. This FYR Report addresses both OUs.

EPA remedial project manager (RPM) Derrick Golden led the FYR. Participants included Paul Craffey from the Massachusetts Department of Environmental Protection (MassDEP) and Johnny Zimmerman-Ward and Kirby Webster from EPA support contractor Skeo. The site property owner is New Millennium Ventures, LLC, which is owned by various partners. New Millennium Ventures, LLC was notified of the initiation of the FYR. The review began on 12/14/2022, when the RPM held a kickoff meeting about the Site with the EPA case team.

Appendix A includes a list of documents reviewed for this FYR. Appendix B provides a chronology of site events.

### **Site Background**

The Site covers about 2 acres in Cordage Park, a business and industrial park next to Plymouth Harbor in the town of Plymouth, Massachusetts (Figure 1). In the past, the Site and surrounding areas were used for commercial and industrial purposes, including for rope manufacturing. In the 1920s, three aboveground storage tanks (ASTs) were installed on site. Until 1974, the ASTs were used for storage of No. 6 marine fuel and bunker C oil for the Cordage Park complex. From 1976 to 1980, CEC used Tank No. 1 and Tank No. 2 for storage of motor oils, solvents, lacquers, organic and inorganic chemicals, cyanide and plating waste, clay and filter media containing chemicals, plating sludge, oil solids, and pesticides (See Figure C-1). Operations resulted in the contamination of soil at the Site.

The Site is located in a medium-yield, non-potential drinking water source area (affected by saline intrusion). It is mostly a vacant lot, overgrown with vegetation. The site property owner has not determined future site use, but is considering keeping it green space. A tidal stream and a boat storage operation border the Site to the east and southeast. An industrial plant borders the Site to the south and southwest. The Seaside Rail Trail passes along the southern portion of the Site. Boat storage borders the Site to the west and a former fish processing plant borders it to the northwest. Plymouth Harbor borders the Site to the north.



**FIVE-YEAR REVIEW SUMMARY FORM**

SITE IDENTIFICATION		
Site Name: Plymouth Harbor/Cannon Engineering Corp.		
EPA ID: MAD980525232		
Region: 1	State: MA	City/County: Plymouth/Plymouth
SITE STATUS		
NPL Status: Deleted		
Multiple OUs? Yes	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: EPA		
Author name: Derrick Golden		
Author affiliation: EPA		
Review period: 12/14/2022 - 7/3/2023		
Date of site inspection: 3/9/2023		
Type of review: Policy		
Review number: 7		
Triggering action date: 7/3/2018		
Due date ( <i>five years after triggering action date</i> ): 7/3/2023		

**Figure 1: Site Vicinity Map**



## II. RESPONSE ACTION SUMMARY

### **Basis for Taking Action**

CEC terminated operations at the Site in 1980 in response to an Order of Revocation from the Massachusetts Department of Environmental Quality Engineering (MADEQE, now MassDEP). MADEQE noted potential problems, including slow leakage at the bottom seams of one of the tanks, the permeability of earthen dikes surrounding the tanks, odor complaints, and leaks from tank side valves. Tank No. 3 was not used by CEC and remained empty. About 500,000 gallons of liquid hazardous wastes in Tank No. 1 and Tank No. 2 were abandoned when CEC terminated operations. EPA listed the Site on the Superfund program's National Priorities List (NPL) in September 1983.

The Site's 1985 Remedial Investigation (RI) completed by an EPA contractor characterized soil, groundwater, surface water and sediments from areas on and next to the Site. The primary contaminants of concern (COCs) identified in the soil during the RI were polycyclic aromatic hydrocarbons (PAHs), pesticides and lead. Sampling of groundwater, sediments and surface water found that these media did not present a concern.

Data from the RI indicated that potential receptors for site contaminants were people working in the vicinity of the Site who may breathe in contaminated soil particles, and people who are on site and come in direct contact with contaminated soil.

Ecological risks did not drive any response actions. The Site offers little terrestrial habitat, so the primary media of ecological concern would be off-site surface water and/or sediment. Several contaminants were found in on-site soils and in off-site surface water and sediment. However, these occurrences are unrelated to the Site, based on data presented in the Site's 1989 Endangerment Assessment Report. The assessment concluded that the near absence of site contaminants in groundwater, and the lack of a soil concentration gradient from on-site soil to a nearby tidal stream, indicate that site contaminants did not migrate off site.

### **Response Actions**

A consent agreement between EPA and Salt Water Trust, the site owner, was entered into in August 1983, which required the Trust to drain and clean one of the two tanks containing waste. In September 1983, Jetline Services, Inc., under contract to Salt Water Trust, began pumping wastes from Tank No. 1. Drainage of Tank No. 2 finished in January 1984, led by EPA contractors. Tank No. 3 never contained hazardous materials.

EPA selected a remedy for the Site in the Site's 1985 Record of Decision (ROD). It also identified the following remedial action objectives (RAOs):

- Minimize the potential for direct contact with surface soil.
- Minimize the potential for off-site migration of hazardous chemicals.

The ROD required the completion of the following three actions:

- Dismantling and off-site disposal of the three ASTs and associated piping.
- Supplemental sampling of all media to confirm the pattern of contamination identified in the RI and characterization of the areas beneath the three ASTs.
- Preparation of a site-specific floodplain assessment.

The ROD did not include any applicable or relevant and appropriate requirements (ARARs) and/or to-be-considered criteria (TBCs) because it preceded the Superfund Amendments and Reauthorization Act of 1986, which mandated identification of and compliance with ARARs.

A plan for future action set forth in the 1985 ROD indicated that data generated from the supplemental sampling and floodplains assessment would be evaluated to assess the need for an amended ROD. After implementation of the ROD and evaluation of the sampling data, however, EPA, in consultation with the Commonwealth of Massachusetts, determined that the only necessary further response action at the Site was a removal of stained

soils, as described in the section below.<sup>1</sup> EPA determined that no additional decision documents were needed for the Site.

### **Status of Implementation**

In January 1986, a Floodplain Assessment was conducted to evaluate both beneficial and detrimental effects of a remedial action on the floodplain. The report concluded that the Site was within the 100-year floodplain and it examined the potential for the remedial alternatives identified in the Feasibility Study to adversely impact the floodplain. A number of measures to mitigate potential impacts to the floodplain were identified in the report. The recommendations presented in the report were implemented during the remedial action.

In fall 1987, EPA contractors inspected, decontaminated and demolished the three ASTs and associated piping and took the materials off site for disposal. Tank No. 1 and Tank No. 2 were steam cleaned after emptying and the wastes were taken to a hazardous waste disposal facility in Niagara Falls. In fall 1987, the following activities were also completed: (1) supplemental samples were collected from the soils under the dismantled ASTs and from surface and subsurface soil locations outside the tank berms; (2) five on-site groundwater monitoring wells were installed; (3) groundwater samples were collected; and (4) sediments located off site in the tidal seep were sampled.

In both the RI and the supplemental sampling, groundwater samples were free of organic contamination, but contained low levels of lead (below the current federal maximum contaminant level [action level] of 15 micrograms per liter). The distribution of lead contamination was random and no tidal influence was found.

Surface water samples were collected from the tidal stream during the 1987 supplemental sampling event. During both the RI and the supplemental sampling investigation, organic compounds were not detected and lead was the only inorganic compound detected in surface water. Lead concentrations were significantly higher in the RI samples than they were in the supplemental samples; only two of the eight samples collected as part of the supplemental investigation contained low-level detectable concentrations. Silver and selenium were detected during the RI, but not during the supplemental sampling investigation. No COCs associated with surface water were identified.

The collection of sediment samples during both the RI and the 1987 supplemental sampling was limited to the tidal stream located to the east and southeast of the Site. Similar contaminants (PAHs and lead) and levels of contamination were detected in both sets of samples. The only difference noted was that pesticides were not detected in the 1987 supplemental samples as they had been in the RI. In addition, no COCs associated with sediment were identified.

Soil samples collected during the 1987 supplemental sampling event were analyzed for volatile organic compounds (VOCs), PAHs, pesticides, and inorganics. No VOCs were detected in the soil samples, but low levels of PAHs, pesticides and lead were detected. The distribution of contaminants did not follow a distinct pattern vertically or laterally, as was concluded in the RI. The highest concentrations were detected in shallow soils from within the bermed areas.

In 1988, EPA entered into a Consent Decree (CD) with certain Settling Parties (SPs). The CD required that the SPs excavate and dispose of highly contaminated soil (to the visual extent determined by the EPA RPM) in the bermed area where Tank No. 1 had been located, collect post-excavation samples, backfill each of the bermed areas and cover them with 6 to 12 inches of clean fill material. Pursuant to the CD, in September 1988, about 200 tons of stained surface and subsurface soil contaminated with oily and hazardous materials were excavated from the Tank No. 1 area and an additional 50 tons of contaminated soils were excavated from the top 6 to 12 inches inside each of the three bermed areas. The excavated soils from all of these areas were taken to a Subtitle C hazardous waste facility for disposal. Post-excavation soil grab samples were collected from the base and

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<sup>1</sup> EPA was not required to issue an Explanation of Significant Difference, pursuant to CERCLA § 117 (c) concerning its decision to change the plan for future action set forth in the ROD, by authorizing a removal action at the Site.



perimeter of the excavated areas, from the interior of the bermed areas, and from outside the bermed areas. After sampling, the excavation within the Tank No. 1 berm area was backfilled with on-site and off-site soils. Also, an approximate 6-inch to 12-inch-thick blanket of clean fill was placed over the scraped area inside the three tank berms.

After excavation of contaminated soils during the 1988 removal action, soil samples were collected to characterize the excavated areas and general site soils. Post-excavation soil samples were collected from the base and perimeter walls of the excavations, from around the exterior of the three bermed areas, from inside each of the three berms, and from soil excavated from the Tank No. 1 area. Grab samples from each of these four areas were composited to form representative samples, which were analyzed for PAHs, inorganics and pesticides. The results of these 1988 composite samples were:

- PAHs were detected in all of the 1988 composite soil samples. The average total PAH concentration inside the bermed areas was 111 parts per million (ppm). The average total PAH concentration outside the bermed areas was 6 ppm.
- Inorganic compounds were detected in samples at concentrations that were generally within the range of naturally occurring inorganic compounds.
- The average lead concentration was 192 ppm inside the bermed areas and 78 ppm outside the bermed areas.
- The lowest concentrations of both PAHs and lead were found in the composited samples from outside the berms.
- The clean soil fill material was sampled prior to backfilling on the Site. The fill material contained lead at 2.7 ppm, but no PAHs. No pesticides were detected in any of the samples.

EPA completed the Site's Endangerment Assessment in April 1989, using site data collected during and after the response actions. In the assessment report, EPA concluded that use of the Site for commercial or industrial purposes, the likely future use, would not present any current or future unacceptable risks to human health or the environment and that "regulated access is no longer required for the site." Based on the assessment's findings, EPA, in consultation with MassDEP, concluded that no more remedial actions, Explanations of Significant Differences or ROD Amendments were necessary for the Site.

In May 1992, EPA issued the Site's Final Close-Out Report. In November 1993, EPA deleted the Site from the NPL.

### **Institutional Controls**

The 1985 ROD did not require institutional controls; however, they are called for in the Preliminary Close Out Report to satisfy Office of Solid Waste and Emergency Response (OSWER) Directives 9320.2-3A and 9320.2-3B. In 1992, an institutional control, identified as a Declaration of Restrictions, was recorded on the site property deed. The Declaration of Restrictions does not limit redevelopment on the site property for commercial or industrial uses, but otherwise limits redevelopment with respect to certain restricted uses, namely single or multi-unit residential, school facilities, hotels/motels, community-related uses and recreational uses. The Declaration of Restrictions specifies that a risk assessment must be performed prior to redevelopment of the Site for any of the listed restricted uses. EPA, in consultation with MassDEP, would use the results of an acceptable CERCLA risk assessment to determine if the proposed restricted use would pose an unacceptable risk from exposure to contaminated site soil. If the proposed restricted use poses an unacceptable risk, the proposed redevelopment would only be allowed after a response action was performed to reduce the risk to an acceptable level. The Declaration of Restrictions also specifies that a Notice of Restrictions should be recorded in the chain of title within thirty years of the Declaration's original date, *i.e.* on or before April 16, 2022 and every twenty years thereafter. Recording the Notice ensures that the already-recorded Declaration of Restrictions remains effective. EPA recorded the Notice of Restrictions on April 11, 2022, (Appendix D). Table 1 summarizes the institutional controls at the Site. Figure 2 shows the parcel subject to the Declaration of Restrictions.

In 2000, a contractor hired by the property owner of the Site prepared a risk assessment in an effort to support removing the Declaration of Restrictions. However, the 2000 risk assessment was not considered acceptable to

EPA because it did not fulfill all of the requirements of a CERCLA-compliant risk assessment. Its conclusions, therefore, are not included in this FYR Report.

**Table 1: Summary of Planned and/or Implemented Institutional Controls (ICs)**

Media, Engineered Controls, and Areas That Do Not Support UU/UE Based on Current Conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Soil	Yes	Yes <sup>a</sup>	001-000-001C-000	Restrict use of the property for single-family or multiple-family residences, school facilities, hotel/motel, recreational or community facilities. <sup>b</sup>	Declaration of Restrictions, Recorded on April 21, 1992  Book 10915, Page 249  Re-recorded April 11, 2022  Book 56669, Page 95
<p><i>Notes:</i></p> <p>a. The 1985 ROD did not require institutional controls; however, they are called for in the Preliminary Close Out Report to satisfy OSWER Directives 9320.2-3A and 9320.2-3B.</p> <p>b. The Declaration of Restrictions requires the property owner to “inspect, maintain, and repair the fence constructed on the Premises as part of the response actions until EPA, in consultation with MADEP, certifies that no further inspection, maintenance, or repair of all of a portion of the fence is required...” EPA determined in the 1989 Endangerment Assessment that no unacceptable risk exists without the fencing and that this requirement is not necessary to ensure protectiveness.</p>					

**Figure 2: Institutional Controls Map**



### **Systems Operations/Operation & Maintenance (O&M)**

The remedy selected in the ROD did not include any activities that have associated O&M requirements, other than verifying that institutional controls remain in place. No groundwater extraction and treatment systems were required and no source control measures were implemented that would necessitate a long-term O&M program.

### **III. PROGRESS SINCE THE PREVIOUS REVIEW**

The 2018 FYR Report did not identify any protectiveness issues. Table 2 includes the protectiveness determination from the 2018 FYR Report.

**Table 2: Protectiveness Determinations/Statements from the 2018 FYR Report**

<b>OU #</b>	<b>Protectiveness Determination</b>	<b>Protectiveness Statement</b>
1&2 (Sitewide)	Protective	The remedy at the Plymouth Harbor, Cannon Engineering Corporation (CEC) Superfund Site is protective of human health and the environment. This is supported by the fact that the 2018 re-evaluation of the risks determined that there are no unacceptable risks to an older child trespasser, or to a commercial/industrial worker, or to a construction worker at the Site.

### **IV. FIVE-YEAR REVIEW PROCESS**

#### **Community Notification, Community Involvement and Site Interviews**

EPA issued an online news release in January 2023 to announce that the FYR was underway. A copy of the news release is included in Appendix E. The results of the review and the completed FYR Report will be made available on EPA's site profile page at [www.epa.gov/superfund/plymouth](http://www.epa.gov/superfund/plymouth).

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date. The results of these interviews are summarized below. Appendix F includes the completed interview forms.

Paul Craffey with MassDEP said that he has not received any updated information for the Site in several years, however he stated that the Site remedy seems to be protective. He is not aware of any other issues with the Site. David Gould, the Director of the Town of Plymouth Department of Marine and Environmental Affairs (DMEA) is aware of the former environmental issues at the Site and cleanup activities. Mr. Gould is not aware of any unusual or unexpected activities at the Site or any changes to state laws or local regulations that might affect the protectiveness of the remedy. One of the members of the LLC that currently owns the property said that they are aware of the former environmental issues at the Site. They stated that they have had unhoused people try to camp on the Site, but they have been removed with the help of the police. They are aware of the land use restrictions on the property and feel that EPA has kept them informed of activities at the Site. Kristin Ligouri, property manager at Cordage Park, stated that Cordage Park is satisfied with the remedial activities and that the remedy in place is sufficient. Ms. Ligouri believes communication with the surrounding area is adequate.

#### **Data Review**

No data have been collected during this FYR period. Based on the remedy identified in the 1985 ROD, no ongoing monitoring of any media is necessary. The ASTs and soils were removed. Post-excavation soil samples were collected from the base and perimeter walls of the excavations, from around the exterior of the three bermed areas, from inside each of the three berms, and from soil excavated from the Tank No. 1 area. Appendix I provides a screening level evaluation of remaining contaminant concentrations from the 1989 Final Soil Sampling Report and the 1988 Final Supplemental Report, Soil Samples from Outside the Tank Berms.



### **Site Inspection**

The site inspection was conducted on 3/9/2023. In attendance were Paul Craffey with MassDEP, Kristin Ligouri, a site owner representative, and Johnny Zimmerman-Ward with Skeo. The purpose of the inspection was to assess the protectiveness of the remedy. Appendix G includes the completed site inspection checklist. Appendix H includes photographs from the site inspection.

Site inspection participants met at the trail parking area southeast of the Site. Participants discussed potential use at the Site and walked the trail along the south side of the Site. Participants observed site monitoring well MW-5 south of the trail on the western side, which was locked and labeled. The historical tank area is vegetated and overgrown. Trees and other vegetation grow on the remaining berms and through the fence. The seawall on the northern end of the Site is deteriorating; large trees have grown in the wall. There was evidence of some littering. Participants discussed past instances of removing tents that had been placed on the Site by the unhoused. The site owner cleared tents most recently in early 2023 and indicated the removals take place about once a year.

## **V. TECHNICAL ASSESSMENT**

**QUESTION A:** Is the remedy functioning as intended by the decision documents?

### **Question A Summary:**

Yes, the remedy is functioning as intended by the decision documents. The Site's RAOs were to: minimize the potential for direct contact with surface soil and minimize the potential for off-site migration of hazardous chemicals. In fall 1987, the three ASTs and associated piping were inspected, decontaminated, demolished and taken off site for disposal. In September 1988, stained surface and subsurface soils contaminated with oily and hazardous materials were excavated from the top 6 to 12 inches inside the bermed areas. After post-excavation sampling, 6 to 12 inches of clean backfill was placed in each of the bermed areas.

The Site's 1989 Endangerment Assessment, which evaluated remaining site risks after the remedial and removal actions, concluded that use of the Site for commercial or industrial purposes, the likely future use, would not present any current or future unacceptable risks to human health or the environment, and that "regulated access is no longer required for the Site." Therefore, site perimeter fencing, while adding an extra measure to limit exposure, is not needed for the remedy to remain protective.

No O&M activities are required, other than verifying that institutional controls remain in place. Requirements in the Declaration of Restrictions mandate that the property owner perform an EPA-approved (CERCLA-compliant) risk assessment before reuse of the property for certain restricted uses (single or multi-unit residential uses, school facilities, hotels/motels, community-related uses and recreational uses) to help ensure that the remedy remains protective with the proposed use.

**QUESTION B:** Are the exposure assumptions, toxicity data, cleanup levels and RAOs used at the time of the remedy selection still valid?

### **Question B Summary:**

No. There have been changes in the exposure assumptions, methods of evaluating risk, and toxicity information since the time of the remedy selection.<sup>2</sup> However, the RAOs used at the time of remedy selection are still valid. The changes described below are not expected to affect the protectiveness of the remedy because contaminated soils were removed and replaced with 6 to 12 inches of clean fill. Additionally, the 1989 Endangerment Assessment concluded that there were no remaining risks to human health or the environment following remedial and removal actions. A reevaluation of risks may be needed if there are land use changes in the future.

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<sup>2</sup> EPA's regional screening levels (RSLs) provides default screening tables that reflect current toxicities and chemical-specific parameters to assist in decision-making concerning CERCLA hazardous waste sites and determine whether levels of contamination found at the Site may warrant further investigation or site cleanup, or whether no future investigation or action may be required. The current RSLs (November 2022) are located at: <https://www.epa.gov/risk/regional-screening-levels-rsls-whats-new>.

### ***Changes in Standards and TBCs***

New standards (federal or state statutes and/or regulations), as well as new TBC guidances, should be considered during the FYR process as part of the protectiveness determination. Under the NCP, if a new federal or state statute and/or regulation is promulgated or a new TBC guidance is issued after the ROD is signed, and, as part of the FYR process it is determined that the standard needs to be attained or new guidance procedures followed to ensure that the remedy is protective of human health and the environment, then the FYR should recommend that a future decision document be issued that adds the new standard as an ARAR or guidance as a TBC to the remedy.

EPA guidance states:

“Subsequent to the initiation of the remedial action new standards based on new scientific information or awareness may be developed and these standards may differ from the cleanup standards on which the remedy was based. These new...[standards] should be considered as part of the review conducted at least every five years under CERCLA §121(c) for sites where hazardous substances remain on-site. The review requires EPA to assure that human health and the environment are being protected by the remedial action. Therefore, the remedy should be examined in light of any new standards that would be applicable or relevant and appropriate to the circumstances at the site or pertinent new [standards], in order to ensure that the remedy is still protective. In certain situations, new standards or the information on which they are based may indicate that the site presents a significant threat to health or environment. If such information comes to light at times other than at the five-year reviews, the necessity of acting to modify the remedy should be considered at such times.” (See CERCLA Compliance with Other Laws Manual: Interim Final (Part 1) EPA/540/G-89/006 August 1988, pp. 1-56.)

Since the ROD did not specify any ARARs or TBCs, there were no standards to review, except for the human health risk assessment guidance described below. Site soils were identified as the only potential threat, and PAHs and lead were identified as the only COCs in the Site’s 1989 Endangerment Assessment. The soil removal and subsequent site deletion were based on risk calculations determined to be within EPA acceptable risk ranges for commercial/industrial uses, coupled with the recording of the deed restriction that restricts certain uses of the site property. Appendix I compares post-excavation soil sampling data with current commercial/industrial screening levels. It indicates that contamination from soils on the Site remain within EPA acceptable risk ranges for commercial/industrial uses. Sampling locations are shown in Appendix C, Figures C-2 and C-3.

### ***Changes in Toxicity and Other Contaminant Characteristics***

#### **Lead in Soil Cleanups**

EPA continues to examine the science around lead exposure. Updated scientific information indicates that adverse health effects are associated with blood lead levels (BLLs) at less than 10 micrograms per deciliter (µg/dL). Several studies have observed “clear evidence of cognitive function decrements in young children with mean or group BLLs between 2 and 8 µg/dL.”

Based on this updated scientific information, EPA is including an evaluation of potential lead risks with a goal to limit exposure to residential and commercial soil lead levels such that a typical (or hypothetical) child or group of similarly exposed children would have an estimated risk of no more than 5% of the population exceeding a 5 µg/dL BLL. This is based on evidence indicating cognitive impacts at BLLs below 10 µg/dL. A target BLL of 5 µg/dL reflects current scientific literature on lead toxicology and epidemiology that provides evidence that the adverse health effects of lead exposure do not have a threshold.

EPA’s 2017 Office of Land and Emergency Management Memorandum “Transmittal of Update to the Adult Lead Methodology’s Default Baseline Blood Lead Concentration and Geometric Standard Deviation Parameters” (OLEM Directive 9285.6-56) provides updates on the default BLL concentration and default geometric standard deviation input parameters for the Adult Lead Methodology (ALM). These updates are based on the analysis of 2009-2014 data from the National Health and Nutrition Examination Survey, with a recommended updated value for BLL concentrations of 0.6 µg/dL and the geometric standard deviation of 1.8.

Using updated default Integrated Exposure Uptake Biokinetic Model and ALM parameters at a target BLL of 5 µg/dL, site-specific lead soil screening levels (SLs) of 200 ppm and 1,000 ppm are developed for residential and commercial/industrial exposures, respectively.

Given the ongoing review of information, the above SLs are considered in this FYR for informational purposes.

The Site's 1989 Endangerment Assessment identified lead as a COC in the ROD based on a BLL of 10 µg/dL. Following the Region 1 Lead Strategy, existing soil data was compared to 1,000 ppm. Although the Site's Endangerment Assessment, which used data collected in the mid-1980s, showed some high detections of lead prior to removal actions, post-removal sampling indicated that lead levels in soil were below the commercial screening level of 1,000 ppm, with an average concentration of 192 ppm and a maximum concentration of 219 ppm reported after excavations. Based on this available data, there is no unacceptable risk from lead in soil. Therefore, no further remedial work to address lead is necessary. However, if land use were to change in the future, the lead issue may need to be revisited.

### ***Expected Progress Toward Meeting RAOs***

The ROD identified the following RAOs based on the information in the Site's RI Report:

- Minimize the potential for direct contact with surface soil.
- Minimize the potential for off-site migration of hazardous chemicals.

Tank removal and disposal, excavation and removal of contaminated soils, and backfilling and covering of tank bermed areas with 6 to 12 inches of clean fill have reduced the potential for direct contact with contaminated surface soil and have also reduced off-site migration of hazardous chemicals. The deed restriction allows unrestricted redevelopment for commercial/industrial uses, but otherwise requires an updated risk assessment before redevelopment is allowed for certain restricted uses, including single or multi-unit residential uses, school facilities, hotels/motels, community-related uses and recreational uses.

**QUESTION C:** Has any other information come to light that could call into question the protectiveness of the remedy?

The expected impacts of climate change in New England pose increasing risks to contaminated sites. Increases in air and water temperature, precipitation, flooding and periods of drought may result in altered fate and transport pathways and exposure assumptions, impaired aquatic habitats, dispersal of contaminants, damage to remediation related structures and ultimately, ineffective remedies. At coastal sites, saltwater impacts made more likely by sea-level rise may cause corrosion of remediation equipment and impair restoration efforts. Increased frequency of extreme weather events may cause damage or releases at sites, impairing remedial efforts where remedies have not been adequately designed to protect against these risks.

The risks posed by climate change in New England could possibly impact the protectiveness of the remedy at the Site in the future. The impacts of sea level rise, flooding and/or storm surge could possibly adversely affect the clean soil cover because the Site is located near Plymouth Harbor. However, there is no evidence that any of these events have occurred at the Site and FYRs will continue to assess the protectiveness of the remedy.

Next, no information indicates that Polyfluoroalkyl Substances (PFAS) create any risk that would call into question the protectiveness of the Site's remedy. PFAS are a group of manufactured chemicals that have been used in the industry and consumer products since the 1940s. For example, PFAS are used in stain- and water-resistant fabrics and carpeting, cleaning products, paints, and fire-fighting foams, cookware, food packaging, and food processing equipment. Scientific studies have shown that exposure to some PFAS in the environmental may be linked to harmful health effects in humans and animals. Sampling for PFAS has not been done at the Site because, per the 1985 ROD, groundwater and surface water were not contaminated with Site related contaminants. Therefore, no exposure pathways for groundwater and surface water existed creating any

unacceptable risks. Since no manufacturing was ever conducted at the Site, and without any expectation to find PFAS, EPA did not sample any media for the 2023 FYR.

Last, no information indicates that 1,4-dioxane creates any risk that would call into question the protectiveness of the Site's remedy. 1,4-Dioxane is used as a solvent in a variety of commercial and industrial applications. 1,4-Dioxane is a synthetic industrial chemical that is a likely contaminant at many sites contaminated with certain chlorinated solvents (particularly 1,1,1-trichloroethane (TCA) because of its widespread use as a stabilizer for chlorinated solvents. As mentioned above, however, groundwater at the Site was not contaminated with any Site-related contaminants, particularly including any chlorinated solvents, which, as noted, may be linked to accompanying 1,4-dioxane. As a result, with no expectation to find 1,4-dioxane EPA did not sample any media for the 2023 FYR.

## VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations
<b>OU(s) without Issues and Recommendations Identified in the FYR:</b>
<i>OU1 and OU2</i>

### Other Findings

The following recommendations were identified during the FYR, but do not affect current or future protectiveness:

- During the site visit, there was evidence of some littering and participants discussed past instances of removing tents that had been placed on the Site by the unhoused. The owners should continue to monitor the Site for unallowable usage by trespassers.
- Consider properly abandoning groundwater monitoring wells since they are no longer used and not necessary to ensure continued protectiveness.
- Consider completing a human health and ecological risk assessment that fulfills all of the requirements of a CERCLA-compliant risk assessment or conduct additional soil sampling if the property owner decides to reuse the Site for a Restricted Use (restricted uses are listed in the Institutional Controls in Appendix D).

## VII. PROTECTIVENESS STATEMENT

OU1, OU2 and Sitewide Protectiveness Statement
<i>Protectiveness Determination:</i> Protective
<i>Protectiveness Statement:</i> The remedy at the Site is protective of human health and the environment. There are no unacceptable risks for commercial/industrial use at the Site.

## VIII. NEXT REVIEW

The next FYR for the Plymouth Harbor/Cannon Engineering Corp. Superfund site is required five years from the completion date of this review in 2028.

## APPENDIX A – REFERENCE LIST

- Ebasco Services Incorporated. 1988. Final Supplemental Report. First Operable Unit. Remedial Action for Cannons Engineering/Plymouth Harbor. Plymouth, Massachusetts. Ebasco Services Incorporated. April 1988.
- EPA. 1985. Superfund Record of Decision. Cannon/Plymouth, MA. EPA. September 30, 1985.
- EPA. 1985. Remedial Investigation, Cannon Engineering Corporation Plymouth Site, Plymouth, MA. June 1985
- EPA. 1989. Cannon Engineering Corporation Plymouth Harbor Site. Endangerment Assessment Public Health. Post-Remedial/Removal Action. EPA. April 6, 1989.
- EPA. 1992. Superfund Site Preliminary Close Out Report. Cannons Engineering Corporation (CEC) Plymouth Harbor Superfund Site. Plymouth, Massachusetts. March 2, 1992.
- EPA. 2008. Five-Year Review Report for Plymouth Harbor, Cannon Engineering Corporation (CEC) Superfund Site. Plymouth County, Plymouth, Massachusetts. U.S. Environmental Protection Agency. Region 1 – New England. July 3, 2018.
- EPA. 2014. Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors Memorandum. OSWER Directive 9200.1-120.
- EPA. 2017. Transmittal of Update to the Adult Lead Methodology's Default Baseline Blood Lead Concentration and Geometric Standard Deviation Parameters Memorandum, May 17, 2017. OLEM Directive 9285.6-56.
- EPA. 2021. Recommendations on the Use of Chronic or Subchronic Noncancer Values for Superfund Human Health Risk Assessments Memorandum, May 26, 2021. Office of Land and Emergency Management, Washington, DC. 2021.
- EPA. Integrated Risk Information System (IRIS). Available at <https://www.epa.gov/iris>.
- EPA. Provisional Peer-Reviewed Toxicity Values. Available at <https://www.epa.gov/pprtv>.
- EPA. Regional Screening Level Tables. Available at <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.
- GEI Consultants, Inc. 1989. Final Soil Sampling Report. Soil Removal Action. Cannons Engineering Corporation. Plymouth Harbor Site. Plymouth, Massachusetts. GEI Consultants, Inc. February 2, 1989.
- Inland Pollution Control, a Division of Chemical Waste Management, Inc. Final Removal Action Summary Report. Cannons Engineering Corporation. Plymouth Site. Plymouth, MA. Prepared by Inland Pollution Control, a Division of Chemical Waste Management, Inc. Submitted to: Responsible Party Project Managers, Cannon Engineering Corp. – Plymouth Site. February 2, 1989.

## APPENDIX B – SITE CHRONOLOGY

**Table B-1: Site Chronology**

Event	Date
Three ASTs were constructed on site and used to store No. 6 marine fuel and bunker C oil for the Cordage Park complex	1920s-1974
Emhart Company sold the property (purchased in 1956) to the Columbian Rope Company	1958
Salt Water Trust acquired title to the Site from the Columbian Rope Company	1969
CEC used Tank No. 1 and Tank No. 2 for storage of motor oils, solvents, lacquers, organic and inorganic chemicals, cyanide and plating waste, clay and filter media containing chemicals, plating sludge, oil solids and pesticides	1976-1980
CEC obtained a license from the MADEQE to store wastes on site	1979
CEC reported types and classes of wastes stored on site MADEQE issued an Order of Revocation; the license was revoked and CEC ceased operations at the Site	1980
MADEQE documented potential problems noted during numerous site visits (leaking tanks, odors, pool of waste on ground surface) Site hazards assessed	1980-1982
EPA proposed the Site for inclusion on the NPL	December 30, 1982
EPA and the Salt Water Trust entered into a consent agreement	September 1, 1983
EPA listed the Site on the NPL	1983
Jetline Services, Inc. began pumping wastes from Tank No. 1 (under contract to the Salt Water Trust)	September 22, 1983
EPA contractors drain Tank No. 2	January 1, 1984
EPA completed the RI and feasibility study A Wetlands Assessment was completed	1985
EPA signed the Site's ROD	September 22, 1985
A Floodplain Assessment was completed	January 1987
EPA completed the Endangerment Assessment for the Site	April 6, 1989
A Declaration of Restrictions was recorded on the Site's property deed	1992
EPA issued the Site's first FYR Report	December 4, 1992
EPA deleted the Site from the NPL	November 19, 1993
EPA issued the Site's second FYR Report	July 29, 1998
EPA issued the Site's third FYR Report	September 26, 2003
EPA issued the Site's fourth FYR Report	September 30, 2008
EPA issued the Site's fifth FYR Report	July 3, 2013
EPA issued the Site's sixth FYR Report	July 3, 2018
A Declaration of Restrictions was re-recorded on the Site's property deed	April 11, 2022



## APPENDIX C – ADDITIONAL SITE MAPS

Figure C-1: Historical Site Map<sup>3</sup>

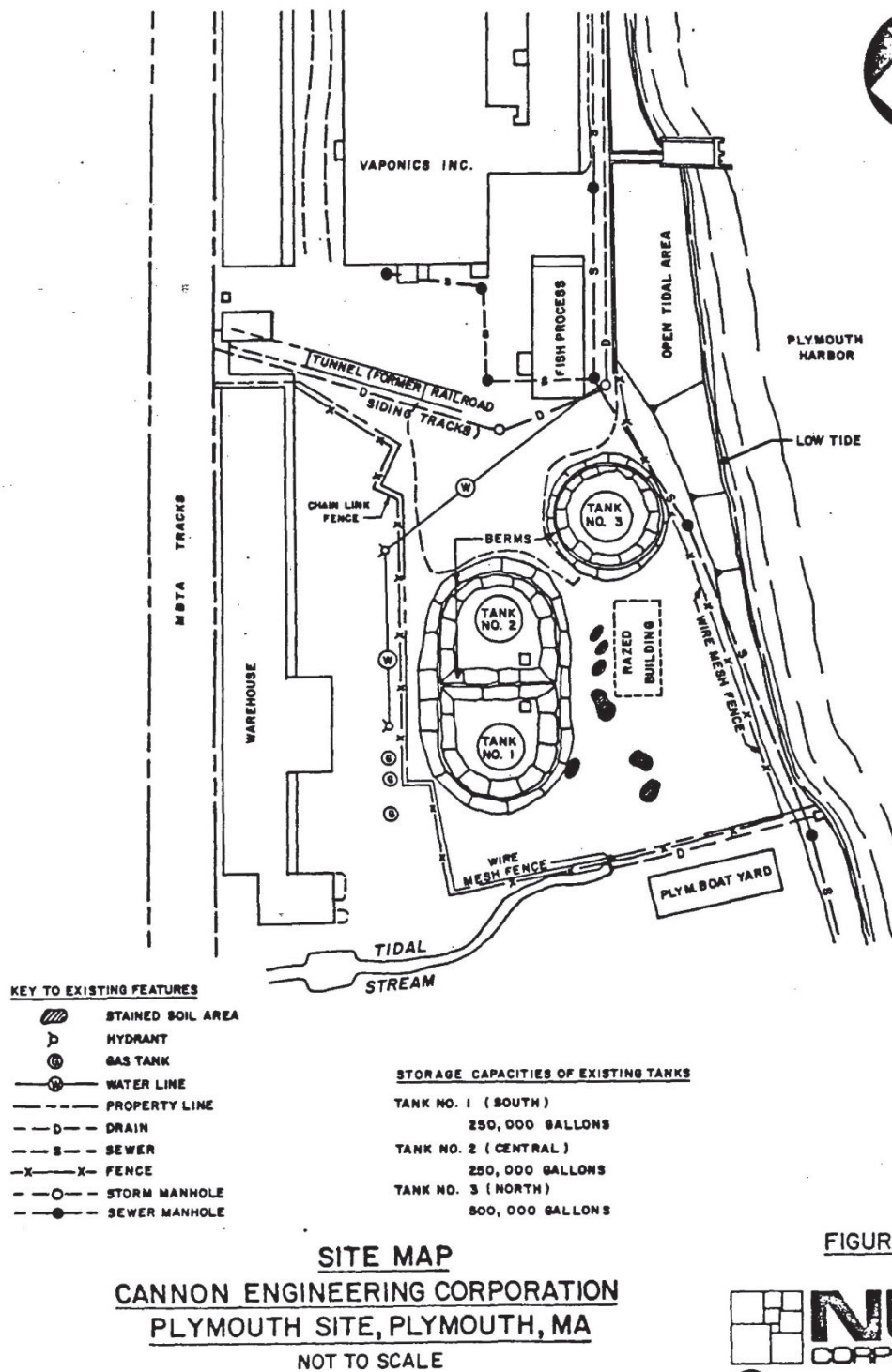
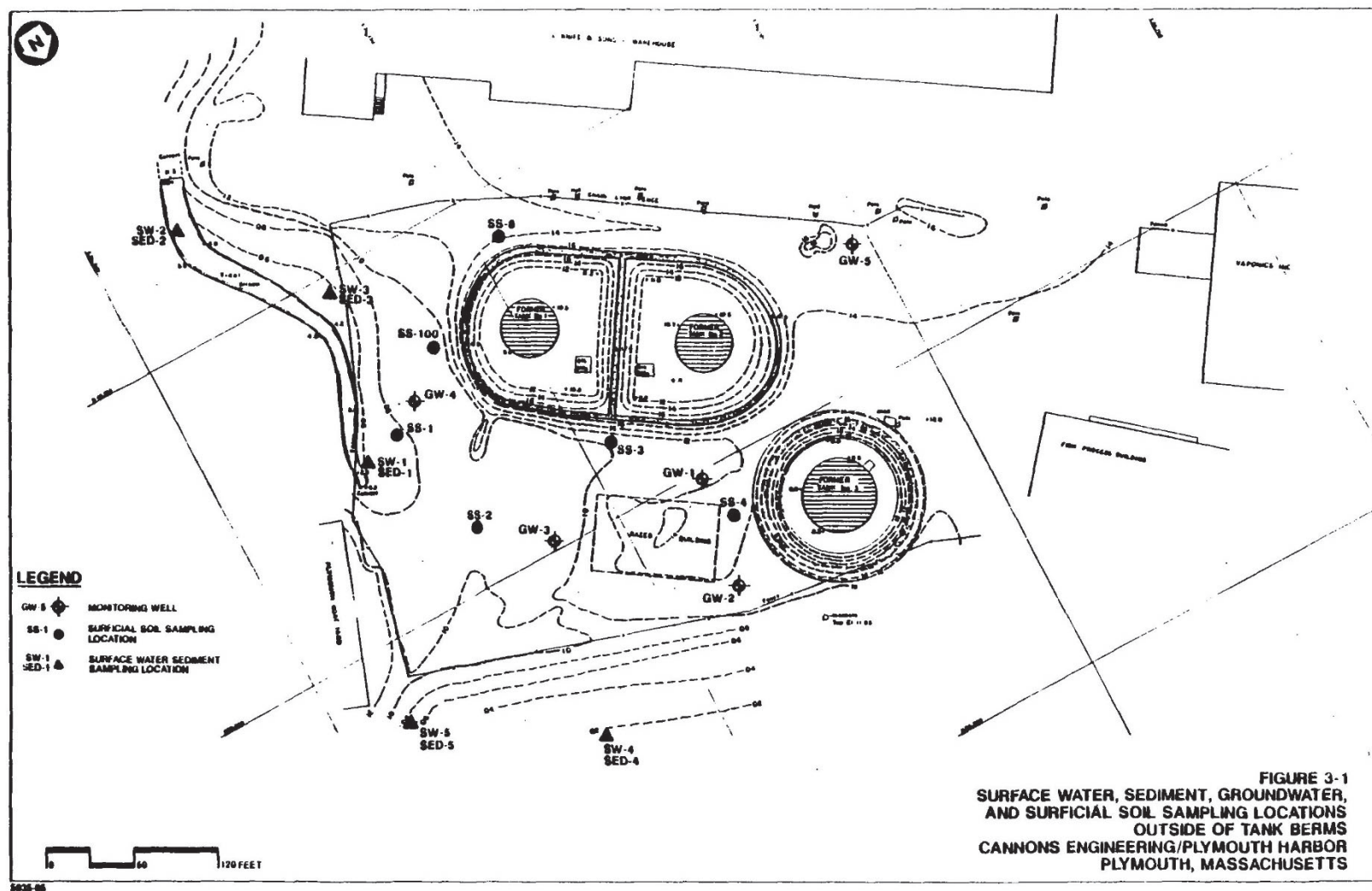


FIGURE 1-2



<sup>3</sup> Source: Figure 1-2 from the 1985 ROD.

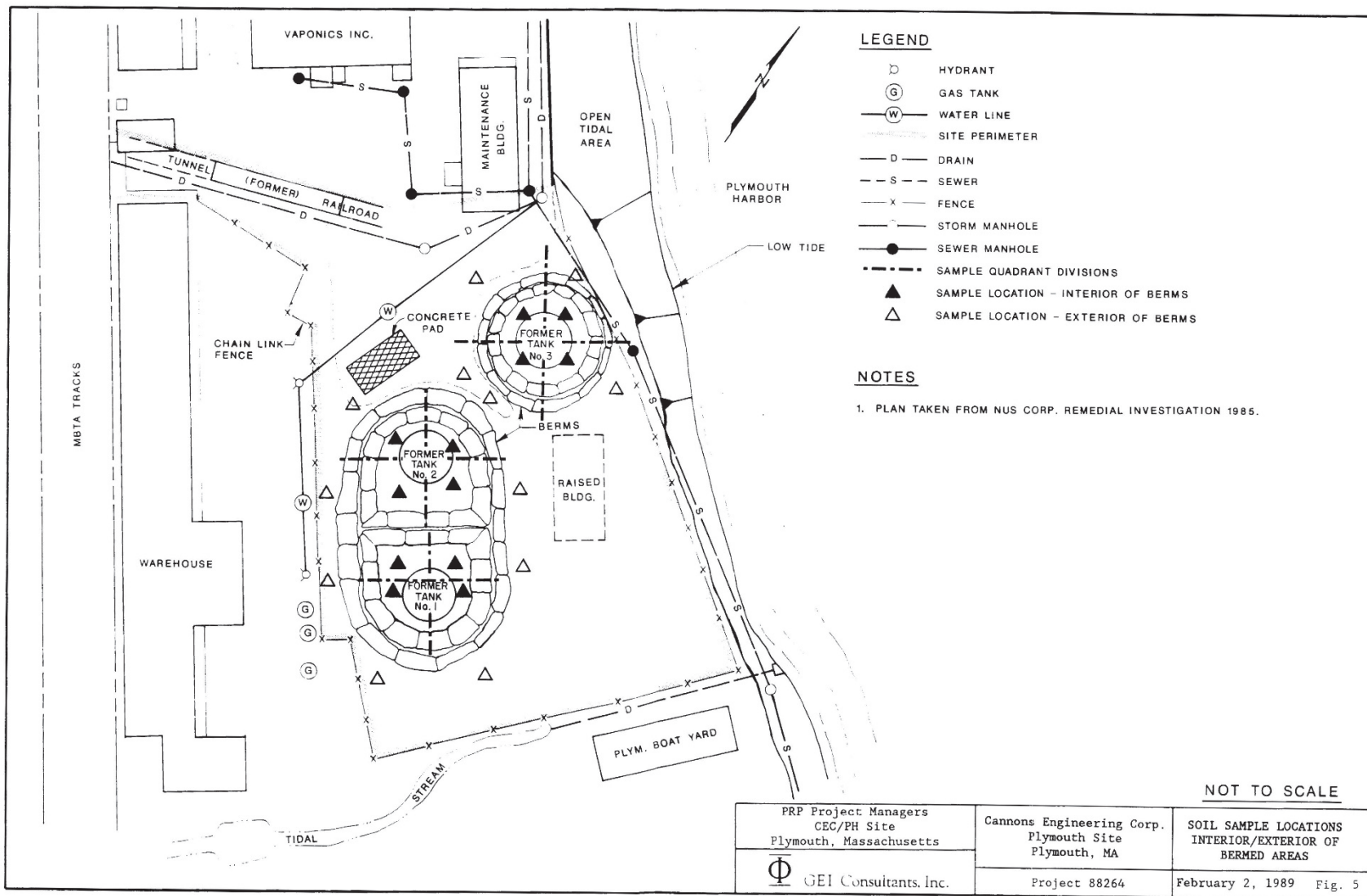
Figure C-2: Soil Sampling Locations - 1988 Soil Sampling Report<sup>4</sup>



<sup>4</sup> Figure 3-1 of the 1988 Final Supplemental Report.



Figure C-3: Soil Sampling Locations - 1989 Final Soil Sampling Report<sup>5</sup>



<sup>5</sup> Figure 5 of the 1989 Final Soil Sampling Report.

## APPENDIX D – NOTICE OF RESTRICTIONS

Superfund Records Center

SITE: Plymouth Harbor

BREAK: 8,7

OTHER: 10107938

### NOTICE OF RESTRICTIONS

2022 00030504  
Bk: 56669 Pg: 95 Page: 1 of 18  
Recorded: 04/11/2022 09:52 AM  
ATTEST: John R. Buckley, Jr. Register  
Plymouth County Registry of Deeds

**Whereas**, the United States Environmental Protection Agency ("USEPA") and the Massachusetts Department of Environmental Protection ("MassDEP") (collectively, the "Agencies"), and their successors and assigns, are the grantees of certain land use restrictions for the purpose of protecting human health and the environment, such land use restrictions being specified in a Declaration of Restrictions, dated April 16, 1992, recorded on April 21, 1992 with the Plymouth County Registry of Deeds ("Registry") at Book 10915, Page 249 ("Declaration of Restrictions");

**Whereas**, a copy of the Declaration of Restrictions is attached hereto as Exhibit A;

**Whereas**, the land use restrictions established by the Declaration of Restrictions apply to a certain area of land containing approximately 2.73 acres ("Restricted Area") situated in the Town of Plymouth, Massachusetts, as more particularly shown on a plan entitled "Plan of Restricted Area in Plymouth, Massachusetts prepared for Arthur B. Blackett, Konrad Gesner and Francis C. Rogerson, Jr., Trustees of Salt Water Trust, Hayward-Boynton and Williams, Inc.," dated October 1, 1991, recorded on April 21, 1992 with the Registry at Plan Book 35, Page 24 ("1992 Plan");

**Whereas**, a copy of a portion of the 1992 Plan showing the Restricted Area is attached hereto as Exhibit B;

**Whereas**, the Restricted Area was part of a parcel of land ("Property") conveyed by Columbian Rope Company to Arthur B. Blackett, Konrad Gesner and Francis C. Rogerson, Jr., Trustees of Salt Water Trust under Declaration of Trust dated June 2, 1966, recorded with the Registry at Book 3568, Page 228, pursuant to a deed dated December 22, 1969, recorded on December 22, 1969 with the Registry at Book 3568, Page 238;

**Whereas**, the Property was conveyed to Cordage Development, LLC by a deed dated December 20, 2000, recorded on December 22, 2000 with the Registry at Book 19201, Page 291 ("Cordage Deed");

**Whereas**, a portion of the Property, containing 2.6 acres more or less, was conveyed by Cordage Development, LLC to New Millennium Ventures LLC, by a Quitclaim Deed dated March 24, 2006, recorded on July 24, 2006 with the Registry at Book 33069, Page 4 ("New Millennium Quitclaim Deed");

**Whereas**, the portion of the Property that was transferred to New Millennium Ventures LLC by the New Millennium Quitclaim Deed is referred to herein as "Parcel 1C" and is described further below;

**Whereas**, the remaining portion of the Property that was not transferred by Cordage Development, LLC to New Millennium Ventures LLC by the New Millennium Quitclaim Deed is shown as "Parcel '1D' Remaining Area" on a plan entitled "Plan of Land in Plymouth, Massachusetts prepared for New Millennium Ventures LLC, scale 1"=40', dated March 16,

See Loring Blvd Plymouth MA  
off Court St Plymouth MA

Mar 1  
Derrick Golden  
11 Bourne Dr  
Halifax MA 02338



SEMS DocID 662938

2001, by Hayward-Boynnton & Williams, Inc., Surveyors, Civil Engineers, 140 School St., Brockton, Mass.” recorded on April 27, 2001 with the Registry in Plan Book 44, Page 452 (“2001 Plan”);

**Whereas**, a copy of a portion of the 2001 Plan is attached hereto as Exhibit C;

**Whereas**, all or some portion of said Parcel ‘1D’ Remaining Area is currently identified by the Town of Plymouth, Massachusetts Tax Assessor’s Office as Map 1, Lot 1E at 56 Loring Boulevard, Plymouth, Massachusetts (said Parcel ‘1D’ Remaining Area, being all of the Property that was not conveyed to New Millennium Ventures LLC pursuant to the New Millennium Quitclaim Deed, hereinafter referred to as “Parcel 1D/Lot 1E”);

**Whereas**, a copy of a portion of said Map 1 is attached hereto as Exhibit D;

**Whereas**, a portion of the Restricted Area is contained in Parcel 1C, and the remaining portion of the Restricted Area is contained in Parcel 1D/Lot 1E;

**Whereas**, the Declaration of Restrictions specifies that a notice of restrictions, in compliance with law, shall be recorded before the expiration of thirty (30) years from the date of that instrument naming the person or persons appearing of record who own the parcel or parcels of land that contain the Restricted Area at the time of recording;

**Whereas**, the Declaration of Restrictions also states that (1) “[f]ailure to record the notice of restrictions in accordance with this [Declaration of Restrictions] shall not affect the enforceability of [the] restrictions pursuant to the provisions of G.L. c. 184, § 32” and (2) G.L. c. 184, § 23 creates an exception “in cases of gifts or devises for public, charitable or religious purposes” such as the Declaration of Restrictions to the general rule that “conditions or restrictions, unlimited as to time, by which the title or use of real property is affected, shall be limited to the term of thirty years after the date of the deed or other instrument;”

**Now therefore**, the Agencies provide this renewed notice of the Declaration of Restrictions as it applies to Parcel 1C and Parcel 1D/Lot 1E through the recording of this Notice of Restrictions with particular notation of the information below in accordance with the information requirements specified at G.L. c. 184, § 27.

#### **Descriptions of Subject Parcels**

Parcel 1C, the entirety of which is contained within the Restricted Area, is further described as:

A certain parcel of land containing about 2.6 acres more or less located on the northerly side of Sandri Drive, in the Town of Plymouth, Plymouth County, Massachusetts being shown as Parcel “1C” on the 2001 Plan as bounded and described as follows:

Thence: By the northerly sideline of said Sandri Drive N58°43’30”W, as Distance of 208.63 feet to Parcel 1D/Lot 1E.

Thence: By said Parcel B, N58°43’30”W, a distance of 220.79 feet to a corner;



Thence: Continuing by said Parcel 1D/Lot 1E, N31°16'27"E, a distance of 83.22 feet to a corner;

Thence: Continuing by said Parcel 1D/Lot 1E, N12°38'01"E, a distance of 160.00 feet more or less to Plymouth Harbor;

Thence: By said Plymouth Harbor in an easterly direction, a distance of 405 feet more or less to land of Eight Mates Realty Trust;

Thence: By land of said Eight Mates Realty Trust S17°38'00"W, a distance of 345 feet more or less to the point of beginning.

See New Millennium Quitclaim Deed, referred to above.

Parcel 1C is also currently identified by the Town of Plymouth, Massachusetts Tax Assessor's Office as Map 1, Lot 1C at Off Court Street, Plymouth, Massachusetts. See Exhibit D.

Parcel 1D/Lot 1E, approximately 0.13 acres of which is contained in the Restricted Area, is further described as:

A certain parcel of land containing about 20.1 acres in the Town of Plymouth, Plymouth County, Massachusetts being shown as the "Parcel '1D' Remaining Area" on the 2001 Plan.

See New Millennium Quitclaim Deed, referred to above.

The portion of the Restricted Area that is within Parcel 1D/Lot 1E is roughly equivalent to the area comprising the western portion of Sandri Drive on the southern border of Lot 1C to the western edge of Lot 1C, as depicted in the 2001 Plan.

#### **Ownership of Subject Parcels**

The name of the present owner of Parcel 1C is:

New Millennium Ventures LLC  
11 Preston Hill Road  
New Ipswich, NH 03071

See New Millennium Quitclaim Deed, referred to above.

The name of the present owner of Parcel 1D/Lot 1E is:

Cordage Development LLC  
10 Cordage Park Circle, Suite 235  
Plymouth, MA 02360

See Cordage Deed, referred to above.

**Instrument imposing the restriction, Place of record in the public records**

The land use restrictions imposed on the Property, as divided into Parcel 1C and Parcel 1D/Lot 1E, are created by the above-mentioned Declaration of Restrictions, dated April 16, 1992, and recorded on April 21, 1992, in the Plymouth County Registry of Deeds in Book 10915, at Page 249. A copy of the Declaration of Restrictions is also attached as Exhibit A hereto.

**Notarized signatures by persons entitled of record to the benefit of the restriction**

USEPA and MassDEP, as the grantees of the land use restrictions transferred by the Declaration of Restrictions, are the entities entitled of record to the benefit of those restrictions. Duly delegated representatives of USEPA and MassDEP jointly execute this document below.

In witness whereof, the undersigned, acting by and through the United States Environmental Protection Agency, has executed this instrument the day written below.



Bryan Olson  
Director, Superfund and Emergency Management Division  
U.S. EPA, Region 1

03/20/22

Date

Commonwealth of Massachusetts

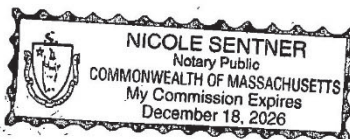
County of Suffolk

On this 28 day of MARCH, 2022, before me, the undersigned notary public, personally appeared Bryan D. Olsen, proved to me through satisfactory evidence of identification, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

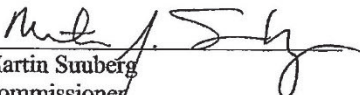


Notary Public

My commission expires: Dec. 18, 2026



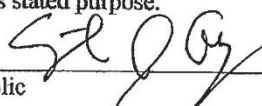
In witness whereof, the undersigned, acting by and through the Massachusetts Department of Environmental Protection, has executed this instrument the day written below.

  
Martin Suuberg  
Commissioner  
Massachusetts Department of Environmental Protection

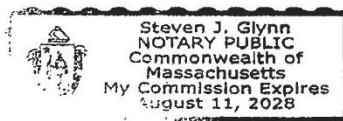
3/25/2022  
Date

Commonwealth of Massachusetts  
County of Suffolk

On this 5<sup>th</sup> day of March, 2022, before me, the undersigned notary public, personally appeared Martin Suuberg, proved to me through satisfactory evidence of identification, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

  
Notary Public

My commission expires: 8-11-2028



**Exhibit A**  
**Declaration of Restrictions**



08/18/99 13:59

SITE:	4-0146
BREAK:	8.02
OTHER:	

**COPY**

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NO.073 002  
40583

Received & Recorded  
PLYMOUTH COUNTY  
REGISTRY OF DEEDS  
21 APR 1992 03:24P  
JOHN D. RIOROHN  
REGISTER

DECLARATION OF RESTRICTIONS

Reference is made to the following facts:

A. Arthur B. Blackett, Konrad Gesner and Francis C. Rogerson, Jr., not individually but as trustees of Salt Water Trust ("SWT") under declaration of trust dated June 2, 1966, recorded with the Plymouth County Registry of Deeds ("Deeds") at Book 3568, Page 228, as amended, own certain land situated in the Town of Plymouth, Massachusetts, as more particularly shown as "Restricted Area" on a plan entitled "Plan of Restricted Area in Plymouth, Massachusetts" prepared for Arthur B. Blackett, Konrad Gesner and Francis C. Rogerson, Jr., Trustees of Salt Water Trust by Hayward-Boynton and Williams, Inc., dated October 1, 1991, to be recorded herewith (the "Plan"), containing approximately 2.73 acres (the "Premises").

B. The Premises constitutes the Cannons Engineering Corporation - Plymouth Harbor Superfund Site which was listed on the National Priorities List of hazardous substances sites pursuant to Section 105 of Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9605, on September 8, 1983.

C. The Premises is the subject of a partial consent decree entered by the United States District Court for the District of Massachusetts in the case of United States v. Cannons Engineering Corporation, et al., 720 F. Supp. 1027 (D. Mass. 1989), aff'd,

mail

John G. Casagrande Jr.  
Palmer & Dodge

Boston, MA 02108

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899 F.2d 79 (1st Cir. 1990).

D. The United States Environmental Protection Agency ("USEPA"), in consultation with the Massachusetts Department of Environmental Protection ("MADEP"), has selected and overseen the implementation of response actions for the Site pursuant to CERCLA.

E. The response actions consisted in part of the removal of three storage tanks from the Premises and the sampling of soils from under those tanks, and the sampling of soils and groundwater on the Premises and of surface water and sediments off-Premises. Thereafter, the USEPA, in consultation with the MADEP, determined that removal and disposal of contaminated soil contaminated with oily materials and CERCLA hazardous substances was necessary. The contaminated soil was located inside the berm where storage tank #1 previously was situated and consisted of shallow soils, contaminated with oily materials and CERCLA hazardous substances to a depth of three to five feet.

NOW, THEREFORE, in order to protect the health, safety and welfare of the inhabitants of the Town of Plymouth, SWT hereby grants the following restrictions to the USEPA, its successors and assigns, and the MADEP, its successors and assigns, which inure to their benefit;

(1) The Premises shall not be used for any single-family or multiple-family residences, school facilities, hotel, motel, or recreational or community facilities (collectively, the "Restricted Uses") unless the terms of this paragraph (1)(a)

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through (1)(d) have been complied with.

(a) Prior to using all or any portion of the Premises for any Restricted Uses, an evaluation (hereafter, "risk assessment") of the potential health risks of exposure to contaminated Premises soil due to the proposed Restricted Use shall be conducted by SWT or its successors or assigns, at the expense of SWT or its successors or assigns. The risk assessment shall be performed by persons(s) experienced in the performance of risk assessments and, unless otherwise directed by USEPA in consultation with MADEP, shall be conducted in accordance with CERCLA, the National Contingency Plan ("NCP"), 40 C.F.R. Part 300, and USEPA and Massachusetts guidance in effect at the time the risk assessment is performed. A full description of the proposed Restricted Use, including all proposed development plans, must be submitted to USEPA and MADEP along with the risk assessment.

(b) Within 120 days of receipt by USEPA and MADEP of the risk assessment and the description of the proposed Restricted Use, USEPA, in consultation with MADEP, shall determine in writing if the proposed Restricted Use would pose an unacceptable risk of exposure to contaminated Premises soils, or shall inform SWT or its successors or assigns of a reasonable additional period of time which USEPA and MADEP require to review the

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risk assessment and description of the proposed Restricted Use. Failure by USEPA to respond within 120 days shall not constitute a determination authorizing SWT, or its successors or assigns, to proceed with its plans to use the Premises for such proposed Restricted Use.

(c) If USEPA, in consultation with MADEP, determines that SWT, or its successors or assigns, may proceed with its plans to use the Premises for a proposed Restricted Use, it shall so certify, in a form recordable by SWT or its successors or assigns, and such portion of the Premises proposed to be used for a Restricted Use may be used for such purpose without limitation or restriction, effective upon the recording of such certification in Deeds.

(d) After reviewing the risk assessment and the description of the proposed Restricted Use, if USEPA, in consultation with MADEP, determines that the proposed Restricted Use would pose an unacceptable risk of exposure to contaminated Premises soils, such portion of the Premises proposed to be used for a Restricted Use thereafter may be used for such purpose only after a response action to reduce such potential unacceptable health risk has been authorized by USEPA, in consultation with MADEP, and performed and completed by SWT or its successors or assigns, at the expense of



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SWT or its successors or assigns. Such action shall be performed in accordance with CERCLA, the NCP, and all other applicable federal and state laws and regulations. Following completion of such response action, SWT or its successors or assigns shall submit to USEPA and MADEP a written report signed by a professional engineer certifying that such action has been fully performed and completed. Within 120 days after receipt of such written report and certification, USEPA, in consultation with MADEP, shall certify, in a form recordable by SWT or its successors or assigns, one of the following: (i) that the portion of the Premises proposed to be used for such Restricted Use may be used without limitation or restriction, effective upon the recording of such certification in Deeds; (ii) that additional work must be performed in order to complete the response action; or (iii) that USEPA and MADEP require a reasonable additional period of time or additional information in order to review the performance of the response action. Failure by USEPA to provide such certification within 120 days shall not constitute a determination that the portion of the Premises proposed to be used for such Restricted Use may be used without limitation or restriction.

(2) Nothing contained in this Declaration of Restrictions is intended to limit or restrict or otherwise effect use of the

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Premises for any commercial, industrial or other use now or hereafter permitted under Section 401.16 (Light Industrial/Waterfront) or other applicable sections of the Town of Plymouth, Massachusetts Zoning Bylaw, as amended, except for the Restricted Uses as provided above and as provided in paragraph (3) below.

(3) SWT or its successors or assigns shall inspect, maintain, and repair the fence constructed on the Premises as part of the response actions, which is shown on the Plan, until USEPA, in consultation with MADEP, certifies that no further inspection, maintenance, or repair of all or a portion of the fence is required; provided, however, that USEPA, in consultation with MADEP, shall agree to so certify upon request in connection with any use of the Premises for any purposes allowed hereunder other than Restricted Uses wherever such use, in the opinion of USEPA in consultation with MADEP, would not significantly increase the potential health risks of exposure to contaminated Premises soil due to the proposed use. Within 30 days after receipt of a request for such certification, USEPA, in consultation with MADEP, shall grant or deny the requested certification or shall inform SWT or its successors or assigns of a reasonable additional period of time which USEPA and MADEP require to review the request for such certification. Failure by USEPA to respond to such request within 30 days shall not constitute a certification that no further inspection, maintenance, or repair of the fence is required.

(4) These restrictions shall run with the land.

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(5) These restrictions hereby imposed are in gross and are not for the benefit of or appurtenant to any particular land but are for the benefit of and enforceable by the USEPA, its successors and assigns, and MADEP, its successors and assigns.

(6) These restrictions shall be enforceable by the United States and the Commonwealth of Massachusetts, pursuant to the provisions of G.L. c. 184, § 26 et seq., or otherwise, or by either one acting singly. A notice of restrictions, in compliance with law, shall be recorded before the expiration of thirty (30) years from the date of this Declaration of Restrictions and shall name the person or persons appearing of record who own the Premises at the time of recording; and in the case of any such recording, a subsequent notice of restriction shall be recorded within twenty (20) years after the recording of any prior notice of restriction until the period of these restrictions has elapsed. Any grantee hereby covenants for, itself, its successors and assigns, to timely execute, and record such documents and take such action, including the surrender of certificate of title, if any, for notation thereon, as shall be necessary to cause such notice of restriction to be effective and enforceable under the then applicable G.L. c. 184, § 26, et seq. The grantor further covenants for itself, its successors and assigns, to include the restrictions and protective covenants herein set out, in each lease and sublease of the Premises or any portion thereof.

No documentary stamps are affixed hereto as none are

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required by law as this conveyance is made without monetary consideration.

Executed as a sealed instrument this 16<sup>th</sup> day of April, 1992.

## SALT WATER TRUST

By Arthur B. Blackett  
Arthur B. Blackett, Trustee

By Konrad Gasner  
Konrad Gasner, Trustee

By Francis C. Rogerson, Jr.  
Francis C. Rogerson, Jr., Trustee

## COMMONWEALTH OF MASSACHUSETTS

Plymouth, ss.

April, 1992

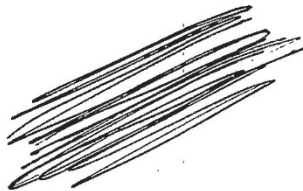
On this 16<sup>th</sup> day of April, 1992, before me appeared Arthur B. Blackett, Konrad Gasner and Francis C. Rogerson, Jr., to me personally known, who, being by me duly sworn, did say that they are Trustees of Salt Water Trust; and that said instrument was signed on behalf of Salt Water Trust as their free act and deed.

Robert C. Durkin  
Notary PublicMy commission expires June 5, 1998

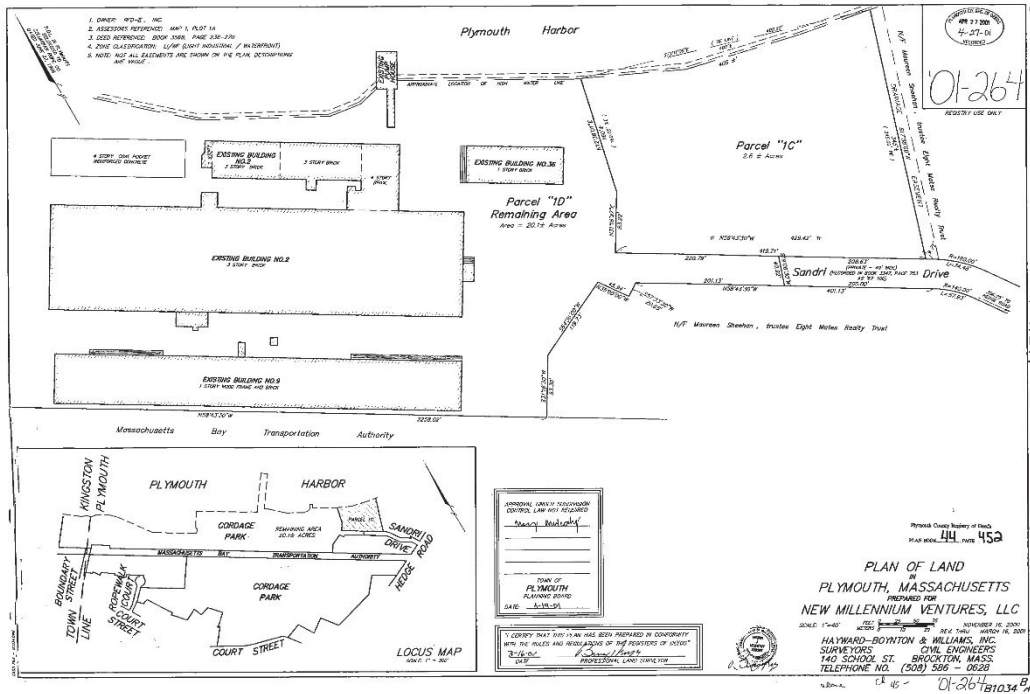
← END OF INSTRUMENT →



Exhibit B  
Portion of 1992 Plan







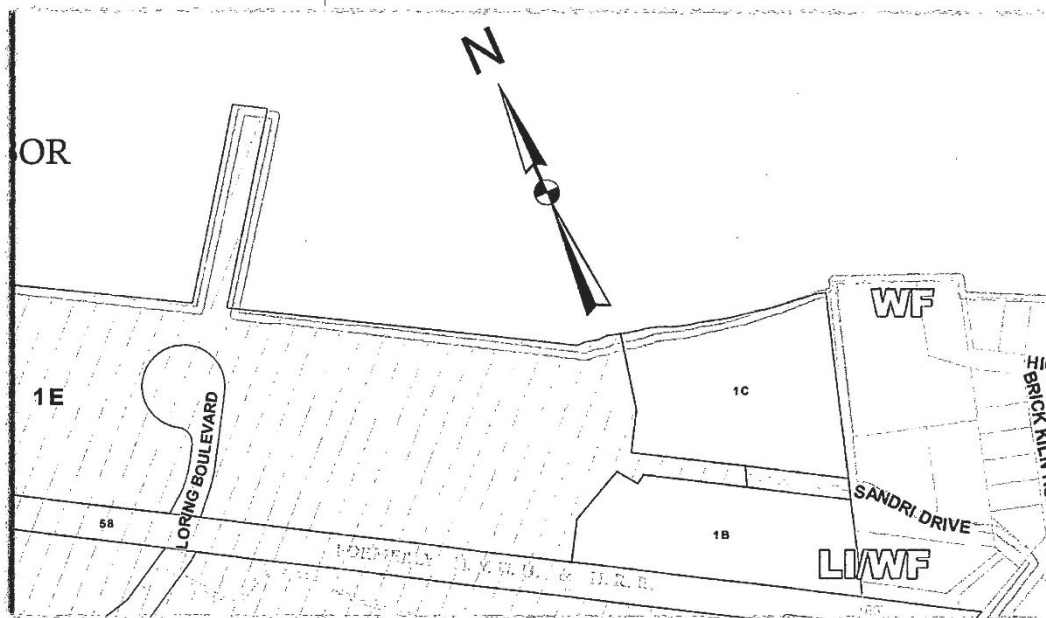


Exhibit D

18  
105  
app of  
all 107



## APPENDIX E – PRESS NOTICE

2/16/23, 2:30 PM

EPA to Review Cleanups at Six Massachusetts Superfund Sites this Year | US EPA

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# EPA to Review Cleanups at Six Massachusetts Superfund Sites this Year

January 18, 2023

## Contact Information

David Deegan ([deegan.dave@epa.gov](mailto:deegan.dave@epa.gov))  
(617) 918-1017

**BOSTON (Jan. 18, 2023)** – The U.S. Environmental Protection Agency (EPA) will conduct comprehensive reviews of completed cleanup work at six National Priority List (NPL) Superfund sites in Massachusetts this year.

The sites will undergo a legally required Five-Year Review to ensure that previous remediation efforts at the sites continue to protect public health and the environment.

"Throughout the process of designing and constructing a cleanup at a hazardous waste site, EPA's primary goal is to make sure the remedy will be protective of public health and the environment, especially for communities that have been overburdened by pollution," said **EPA New England Regional Administrator David W. Cash**. "It is important for EPA to regularly check on these sites to ensure the remedy is working properly and Massachusetts communities continue to be protected."

The Superfund Sites where EPA will conduct Five-Year Reviews in 2023 are listed below with web links that provide detailed information on site status as well as past assessment and cleanup activity. Once the Five-Year Review is complete, its findings will be posted to the website in a final report.

**Five-Year Reviews of Superfund sites in Massachusetts to be completed in 2023:**

Iron Horse Park, Billerica

Plymouth Harbor CEC, Plymouth

Re-Solve, Inc., Dartmouth

Shpack Landfill, Norton/Attleboro

Sullivan's Ledge, New Bedford

**Federal Facility**

Otis Air National Guard Base/Camp Edwards, Falmouth, Bourne, Sandwich, Mashpee

**More information:**

The Superfund program, a federal program established by Congress in 1980, investigates and cleans up the most complex, uncontrolled, or abandoned hazardous waste sites in the country and EPA endeavors to facilitate activities to return them to productive use. In total, there are 123 Superfund sites across New England.

Superfund and other cleanup sites in New England <<https://epa.gov/superfund/search-superfund-sites-where-you-live>>

EPA's Superfund program <<https://epa.gov/superfund>>

Contact Us <<https://epa.gov/newsreleases/forms/contact-us>> to ask a question, provide feedback, or report a problem.

LAST UPDATED ON JANUARY 18, 2023

## APPENDIX F – INTERVIEW FORMS

<b>PLYMOUTH HARBOR/CANNON ENGINEERING CORP SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM</b>	
<b>Site Name:</b> Plymouth Harbor/Cannon Engineering Corp Superfund Site	
<b>EPA ID:</b> MAD980525232	
<b>Interviewer name:</b> Ashlin Brooks	<b>Interviewer affiliation:</b> U.S EPA
<b>Subject name:</b> Paul Craffey	<b>Subject affiliation:</b> State Contact - MassDEP
<b>Subject contact information:</b> <a href="mailto:Paul.Craffey@mass.gov">Paul.Craffey@mass.gov</a> , (617) 645-8738	
<b>Interview date:</b> 2/22/23	<b>Interview time:</b> 2/22/23
<b>Interview location:</b> Online	
<b>Interview format (circle one):</b> In Person   Phone   Mail <b>Email</b> Other:	
<b>Interview category:</b> <b>State Agency</b>	

1. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)? **As the MassDEP State project manager for the Site, I have not received any updated for this Site for several years. Given the lack of information, I am assuming that the Site is not having any issues related to the operations and maintenance (O&M) of the Site.**
  
  2. What is your assessment of the current performance of the remedy in place at the Site? **The Site remedy performance seems to be protective.**
  
  3. Are you aware of any complaints or inquiries regarding environmental issues at the site or abutting properties in the past five years? **I do not know of any community concerns related to the Site.**
  
  4. If complaints have been received, describe how the State has responded and what actions were taken to resolve the issue. Please provide the current status of any complaints and be as detailed as possible.
  
  5. List any outstanding environmental issues that are of concern at this site that are not already addressed by the remedy or have developed since the implementation of the remedy. **I am not aware of any outstanding environmental issues that are of concern at the Site that are not already addressed by the remedy.**
  
  6. Has your office conducted any site-related activities or communications in the past five years? If so, please describe the purpose and results of these activities. **The MassDEP was in communications with EPA regarding the update on the Deed Notice in 2022.**
  
  7. Are you aware of any changes to state laws, regulations, or policies that might affect the protectiveness of the Site's remedy? **None that would affect the protectiveness of the Site's remedy.**
  
  8. Are you comfortable with the status of the institutional controls at the Site? **Yes**
- If not, what are the associated outstanding issues?
9. Are you aware of any changes in projected land use(s) at the Site and/or abutters? **I am not aware of any changes to the land use at the Site or abutters.**
  
  10. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy? **No**

11. Do you consent to have your name included along with your responses to this questionnaire in the FYR report? **Yes**

PLYMOUTH HARBOR/CANNON ENGINEERING CORP SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM	
<b>Site Name:</b> Plymouth Harbor/Cannon Engineering Corp Superfund Site	
<b>EPA ID:</b> MAD980525232	
<b>Interviewer name:</b> Ashlin Brooks	<b>Interviewer affiliation:</b> U.S EPA
<b>Subject name:</b> David Gould, DMEA Director	<b>Subject affiliation:</b> DMEA Director - Town of Plymouth
<b>Subject contact information:</b> <a href="mailto:dgould@plymouth-ma.gov">dgould@plymouth-ma.gov</a> , 26 Court Street, Plymouth, MA 02360	
<b>Interview date:</b> Sent 1/26/23	<b>Interview time:</b> Sent 1/26/23
<b>Interview location:</b> Online	
<b>Interview format (circle one):</b> In Person      Phone      Mail <b>Email</b> Other:	
<b>Interview category:</b> Local Government	

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date? **Yes.**
2. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future? **Yes, but if information could be sent directly to me rather than just through the Town Manager's office that would be ideal.**
3. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism, or trespassing? **No.**
4. Are you aware of any changes to state laws or local regulations that might affect the protectiveness of the Site's remedy? **No**
5. Are you aware of any complaints regarding environmental issues at the site or abutting properties in the past five years? **No**
6. If complaints have been received, describe how the Town has responded and what actions were taken to address or forward the complaints. **N/A**
7. Are you aware of any changes in projected land use(s) at the Site? **No, but it would be helpful to updated information on this matter from the landowners as other parts of the site are actively being redeveloped.**
8. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future? **Direct updates to me as a contact person and updates from the landowner about future plans for this site would be helpful.**
9. Do you have any comments, suggestions or recommendations regarding the project?
10. Do you consent to have your name included along with your responses to this questionnaire in the FYR report? **Yes.**



PLYMOUTH HARBOR/CANNON ENGINEERING CORP. SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM	
<b>Site Name:</b> Plymouth Harbor/Cannon Engineering Corp. Superfund Site	
<b>EPA ID:</b> MAD980525232	
<b>Interviewer name:</b> Ashlin Brooks	<b>Interviewer affiliation:</b> EPA
<b>Subject name:</b> asked to be withheld	<b>Subject affiliation:</b> Member of the LLC that owns the property
<b>Interview date:</b> Sent 2/23/23	<b>Interview time:</b> Sent 2/23/23
<b>Interview location:</b> Online	
<b>Interview format (select one):</b> In Person      Phone      Mail <u>Email</u> Other:	
<b>Interview category:</b> Member of LLC that owns the property	

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Yes.

2. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

The property has not been reused during our ownership to date.

3. What have been the effects of this Site on the surrounding community, if any?

Not sure of any.

4. Have environmental issues, including but not limited to dust, odor, emissions or discharges from the Site or abutting properties, been observed within the past five years? If so, were they reported to the State of Massachusetts and a satisfactory response received? Please be as specific as possible.

Not to my knowledge.

5. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?

We have had homeless people try to camp out there during the summer months but we have removed them with the help of the police.

6. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

EPA has kept us informed.

7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

Not really.

8. Are you aware that there are restrictions on the reuse recorded on the deed to the property, e.g., no residential use?

Yes.

9. Do you consent to have your name included along with your responses to this questionnaire in the FYR report?

No thank you.

PLYMOUTH HARBOR/CANNON ENGINEERING CORP SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM	
Site Name: Plymouth Harbor/Cannon Engineering Corp Superfund Site	
EPA ID: MAD980525232	
Interviewer name: Ashlin Brooks	Interviewer affiliation: U.S EPA
Subject name: Kristin Ligouri	Subject affiliation: Property Manager at Cordage Park
Subject contact information: 508-746-7707 ext 113, <a href="mailto:kristin@cordagecc.com">kristin@cordagecc.com</a> , 10 Cordage Park Circle, Suite 235, Plymouth MA 02360	
Interview date: Sent 4/11	Interview time: Sent 4/11
Interview location: Online	
Interview format (circle one): In Person      Phone      Mail      Email      Other:	
Interview category: Property Manager	

1. What is your overall impression of the remedial activities at the Site? *We are satisfied with the remedial activities of the decommissioned site.*
2. What have been the effects of this Site on the surrounding community, if any? *Minimal, it is overgrown and currently acts as greenspace for the walking path that is on the edge.*
3. What is your assessment of the current performance of the remedy in place at the Site? *The current remedy in place is sufficient. Wells that could be found are capped and locked, they are intermingled with more recent town sewer and water lines.*
1. Have environmental issues, including but not limited to, dust, odor, emissions, or discharges from the site, or abutting properties, been observed within the past 5 years? If so, were they reported to the State of Massachusetts and a satisfactory response received? Please be as specific as possible. *Nothing has been observed emitting from the site. From the outside it seems like a perfectly normal wooded area.*
2. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing? *The parcel sits between a walking path and a small beach area. Occasionally, we will have trespassers walk through and people in the homeless community set up tents.*
3. Are you aware of any changes to state laws, regulations, or policies that might affect the protectiveness of the Site's remedy? *No*
4. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future? *Yes. I think communication with the surrounding areas is adequate.*
5. Do you have any comments, suggestions or recommendations regarding any aspects of the project? *None*
6. Do you consent to have your name included along with your responses to this questionnaire in the FYR report? *Yes*

## APPENDIX G – SITE INSPECTION CHECKLIST

<b>FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST</b>	
<b>I. SITE INFORMATION</b>	
Site Name: <u>Plymouth Harbor/Cannon Engineering Corp.</u>	Date of Inspection: <u>3/9/2023</u>
Location and Region: <u>Plymouth, MA; Region 1</u>	EPA ID: <u>MAD980525232</u>
Agency, Office or Company Leading the Five-Year Review: <u>EPA</u>	Weather/Temperature: <u>40s and sunny</u>
<b>Remedy Includes:</b> (Check all that apply) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Landfill cover/containment  <input type="checkbox"/> Access controls  <input checked="" type="checkbox"/> Institutional controls              (included as a requirement from the Preliminary Close Out Report)           </div> <div style="width: 50%;"> <input type="checkbox"/> Monitored natural attenuation  <input type="checkbox"/> Groundwater containment  <input type="checkbox"/> Vertical barrier walls  <input type="checkbox"/> Groundwater pump and treatment  <input type="checkbox"/> Surface water collection and treatment  <input checked="" type="checkbox"/> Other: <u>Dismantling and disposal of ASTs; soil excavation/off-site disposal removal action</u> </div> </div>	
<b>Attachments:</b> <input type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached	
<b>II. INTERVIEWS</b> (check all that apply)	
<b>1. O&amp;M Site Manager</b> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 40%;">               Name _____                Title _____                Date _____             </div> <div style="width: 60%;">               Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone    Phone: _____                Problems, suggestions <input type="checkbox"/> Report attached: _____             </div> </div>	
<b>2. O&amp;M Staff</b> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 40%;">               Name _____                Title _____                Date _____             </div> <div style="width: 60%;">               Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone    Phone: _____                Problems/suggestions <input type="checkbox"/> Report attached: _____             </div> </div>	
<b>3. Local Regulatory Authorities and Response Agencies</b> (i.e., state and tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices). Fill in all that apply. <div style="margin-top: 10px;">             Agency _____              Contact _____  <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 40%;">Name _____</div> <div style="width: 15%;">Title _____</div> <div style="width: 15%;">Date _____</div> <div style="width: 30%;">Phone No. _____</div> </div>             Problems/suggestions <input type="checkbox"/> Report attached: _____           </div> <div style="margin-top: 10px;">             Agency _____              Contact _____  <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 40%;">Name _____</div> <div style="width: 15%;">Title _____</div> <div style="width: 15%;">Date _____</div> <div style="width: 30%;">Phone No. _____</div> </div>             Problems/suggestions <input type="checkbox"/> Report attached: _____           </div> <div style="margin-top: 10px;">             Agency _____              Contact _____  <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 40%;">Name _____</div> <div style="width: 15%;">Title _____</div> <div style="width: 15%;">Date _____</div> <div style="width: 30%;">Phone No. _____</div> </div>             Problems/suggestions <input type="checkbox"/> Report attached: _____           </div> <div style="margin-top: 10px;">             Agency _____              Contact _____  <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 40%;">Name _____</div> <div style="width: 15%;">Title _____</div> <div style="width: 15%;">Date _____</div> <div style="width: 30%;">Phone No. _____</div> </div>             Problems/suggestions <input type="checkbox"/> Report attached: _____           </div> <div style="margin-top: 10px;">             Agency _____           </div>	

Contact _____ Name _____ Title _____ Date _____ Phone No. _____ Problems/suggestions <input type="checkbox"/> Report attached: _____
4. <b>Other Interviews</b> (optional) <input type="checkbox"/> Report attached: _____
Member of the LLC that owns the property _____
<b>III. ON-SITE DOCUMENTS AND RECORDS VERIFIED</b> (check all that apply)
1. <b>O&amp;M Documents</b> <input type="checkbox"/> O&M manual <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> As-built drawings <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Maintenance logs <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks: _____
2. <b>Site-Specific Health and Safety Plan</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Contingency plan/emergency response plan <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks: _____
3. <b>O&amp;M and OSHA Training Records</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks: _____
4. <b>Permits and Service Agreements</b> <input type="checkbox"/> Air discharge permit <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Effluent discharge <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Waste disposal, POTW <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Other permits: _____ <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks: _____
5. <b>Gas Generation Records</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks: _____
6. <b>Settlement Monument Records</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks: _____
7. <b>Groundwater Monitoring Records</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks: _____
8. <b>Leachate Extraction Records</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks: _____
9. <b>Discharge Compliance Records</b> <input type="checkbox"/> Air <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Water (effluent) <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A Remarks: _____
10. <b>Daily Access/Security Logs</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A



Remarks: _____																							
<b>IV. O&amp;M COSTS</b>																							
1.	<b>O&amp;M Organization</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> State in-house  <input type="checkbox"/> PRP in-house  <input type="checkbox"/> Federal facility in-house  <input checked="" type="checkbox"/> <u>None; O&amp;M is not required.</u> </div> <div style="width: 48%;"> <input type="checkbox"/> Contractor for state  <input type="checkbox"/> Contractor for PRP  <input type="checkbox"/> Contractor for Federal facility </div> </div>																						
2.	<b>O&amp;M Cost Records</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Readily available  <input type="checkbox"/> Funding mechanism/agreement in place </div> <div style="width: 48%;"> <input type="checkbox"/> Up to date  <input type="checkbox"/> Unavailable </div> </div> <p>Original O&amp;M cost estimate: _____ <input type="checkbox"/> Breakdown attached</p> <p style="text-align: center;">Total annual cost by year for review period if available</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">From: _____ Date</td> <td style="width: 25%;">To: _____ Date</td> <td style="width: 25%;">_____ Total cost</td> <td style="width: 25%;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td><input type="checkbox"/> Breakdown attached</td> </tr> </table>			From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached	From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached	From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached	From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached	From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached
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From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached																				
3.	<b>Unanticipated or Unusually High O&amp;M Costs during Review Period</b> Describe costs and reasons: _____																						
<b>V. ACCESS AND INSTITUTIONAL CONTROLS</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A																							
<b>A. Fencing</b>																							
1.	<b>Fencing Damaged</b> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Gates secured <input type="checkbox"/> N/A Remarks: <u>Fencing overgrown with vegetation is on site, but not required for the remedy.</u>																						
<b>B. Other Access Restrictions</b>																							
1.	<b>Signs and Other Security Measures</b> <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> N/A Remarks: _____																						
<b>C. Institutional Controls (ICs)</b>																							

1.	<b>Implementation and Enforcement</b> Site conditions imply ICs not properly implemented Site conditions imply ICs not being fully enforced Type of monitoring (e.g., self-reporting, drive by): _____ Frequency: _____ Responsible party/agency: _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <span>Name</span> <span>Title</span> <span>Date</span> <span>Phone no.</span> </div> Reporting is up to date Reports are verified by the lead agency Specific requirements in deed or decision documents have been met Violations have been reported Other problems or suggestions: <input type="checkbox"/> Report attached	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A  <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
2.	<b>Adequacy</b> <input checked="" type="checkbox"/> ICs are adequate <input type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A Remarks: _____	
<b>D. General</b>		
1.	<b>Vandalism/Trespassing</b> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No vandalism evident Remarks: <u>Some littering was observed on site. Site owners indicated unhoused people have used the Site to camp, but tents were recently removed.</u>	
2.	<b>Land Use Changes On Site</b> <input checked="" type="checkbox"/> N/A Remarks: _____	
3.	<b>Land Use Changes Off Site</b> <input type="checkbox"/> N/A Remarks: <u>Trail across on the southern side of the Site was added within the past five years.</u>	
<b>VI. GENERAL SITE CONDITIONS</b>		
<b>A. Roads</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	<b>Roads Damaged</b> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Roads adequate <input type="checkbox"/> N/A Remarks: _____	
<b>B. Other Site Conditions</b>		
Remarks: <u>Vegetation on site is overgrown and the seawall is collapsing.</u>		
<b>VII. LANDFILL COVERS</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
<b>VIII. VERTICAL BARRIER WALLS</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
<b>IX. GROUNDWATER/SURFACE WATER REMEDIES</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
<b>X. OTHER REMEDIES</b>		
If there are remedies applied at the site and not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction. <u>ASTs and contaminated soil on site were removed.</u>		
<b>XI. OVERALL OBSERVATIONS</b>		
<b>A. Implementation of the Remedy</b>		

	Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is designed to accomplish (e.g., to contain contaminant plume, minimize infiltration and gas emissions). <u>The remedy is functioning as designed. Contaminated ASTs and soils were removed from the Site and institutional controls have been implemented.</u>
<b>B.</b>	<b>Adequacy of O&amp;M</b>
	Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. <u>Not applicable.</u>
<b>C.</b>	<b>Early Indicators of Potential Remedy Problems</b>
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future. <u>Not applicable.</u>
<b>D.</b>	<b>Opportunities for Optimization</b>
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. <u>None.</u>



## APPENDIX H – SITE INSPECTION PHOTOS



Trail access on the southern side of the Site



Overgrown vegetation on the fence between the trail and the Site





Trail on the south side of the Site



Vegetation on the Site





Vegetation, berms and litter on the Site



Northwest corner of the Site's fence; Plymouth Harbor in the background





Seawall on the north end of the Site



Monitoring well MW-5

# APPENDIX I – SOIL SCREENING-LEVEL RISK REVIEW

Chemical	Maximum Concentration (mg/kg)	Commercial/Industrial RSL <sup>a</sup> (mg/kg)		Cancer Risk <sup>b</sup>	Noncancer HQ <sup>c</sup>
		1 x 10 <sup>-6</sup> Risk	HQ = 1.0		
2-methylnaphthalene	34	--	3,000	--	0.01
Acenaphthylene	0.085	--	--	--	--
Acenaphthene	5.3	--	45,000	--	0.0001
Anthracene	11	--	230,000	--	0.00005
Benzo(a)anthracene	16	21	--	8 x 10 <sup>-7</sup>	--
Benzo(a)pyrene	14	2.1	220	7 x 10 <sup>-6</sup>	0.06
Benzo(b)fluoranthene	28	21	--	1 x 10 <sup>-6</sup>	--
Benzo(g,h,i)perylene	5.7	--	--	--	--
Benzo(k)fluoranthene	8.2	210	--	4 x 10 <sup>-8</sup>	--
Chrysene	16	2,100	--	8 x 10 <sup>-9</sup>	--
Dibenz(a,h)anthracene	2.1	2.1	--	1 x 10 <sup>-6</sup>	--
Dibenzofuran	4.4	--	1,200	--	0.004
Di-n-Butylphthalate	5.1	--	82,000	--	0.00006
Dimethyl phthalate	0.49	--	--	--	--
Ethylbenzene	0.004	25	17,000	2 x 10 <sup>-10</sup>	0.0000002
Fluoranthene	41	--	30,000	--	0.001
Fluorene	5.4	--	30,000	--	0.0002
Indeno(1,2,3-cd)pyrene	6.2	21	--	3 x 10 <sup>-7</sup>	--
Bis(2-ethylhexyl)phthalate	35	160	16,000	2 x 10 <sup>-7</sup>	0.002
Naphthalene	3.5	8.6	590	4 x 10 <sup>-7</sup>	0.006
Phenanthrene	56	--	--	--	--
Pyrene	54	--	23,000	--	0.002
Butylbenzylphthalate	3	1,200	160,000	3 x 10 <sup>-9</sup>	0.00002
Diethyl phthalate	0.35	--	660,000	--	0.0000005
Dibutyl phthalate	5.1	--	82,000	--	0.00006
di-n-octyl phthalate	0.52	--	8,200	--	0.00006
Toluene	0.012	--	47,000	--	0.0000003
Xylenes	0.12	--	2,500	--	0.00005
Aluminum	9,150	--	1,100,000	--	0.008
Arsenic	109	3	480	4 x 10 <sup>-5</sup>	0.2
Barium	211	--	220,000	--	0.001
Calcium	13,700	--	--	--	--
Chromium	17	6.3	3,500	3 x 10 <sup>-6</sup>	0.005
Copper	174	--	47,000	--	0.004
Iron	25,800	--	820,000	--	0.03
Lead	287	800 <sup>d</sup>		Below 800	
Magnesium	6,030				
Manganese	397	--	26,000	--	0.02
Tin	32	--	700,000	--	0.00005
Vanadium	46	--	5,800	--	0.008
Zinc	257	--	350,000	--	0.0007

Notes:

a. Current EPA Regional Screening Levels (RSLs), dated November 2022, are available at <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables> (accessed 3/3/2023).



Chemical	Maximum Concentration (mg/kg)	Commercial/Industrial RSL <sup>a</sup> (mg/kg)		Cancer Risk <sup>b</sup>	Noncancer HQ <sup>c</sup>
		1 x 10 <sup>-6</sup> Risk	HQ = 1.0		
<p>b. The cancer risks were calculated using the following equation, based on the fact that RSLs are derived based on 1 x 10<sup>-6</sup> risk: cancer risk = (cleanup level ÷ cancer-based RSL) × 10<sup>-6</sup>.</p> <p>c. The noncancer HQ was calculated using the following equation: HQ = cleanup level ÷ noncancer-based RSL.</p> <p>d. EPA has not developed carcinogenic and non-carcinogenic RSLs for lead and evaluates lead exposure using blood-lead modeling. The cleanup goal is directly compared to the RSL.</p> <p>HQ = hazard quotient</p> <p>-- = not applicable; toxicity criteria not established.</p> <p>mg/kg = milligrams per kilogram</p> <p>Source: Table 3 of the Final Soil Sampling Report (PDF pages 21 and 22), Table 4-2 of the Final Supplemental Report, Soil Samples from Outside the Tank Berms (PDF pages 30 and 31).</p>					